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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,787	03/26/2004	Alan C. Wendt	920095-95446	9635

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EXAMINER
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PHILLIPS, FORREST M

ART UNIT	PAPER NUMBER
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2837

MAIL DATE	DELIVERY MODE
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10/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/810,787

Applicant(s)

WENDT ET AL.

Examiner

Forrest M. Phillips

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4,7-11,14-19,22-28 and 31-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,7-11,14-19,22-28 and 31-62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 7, 9-11, 14, 17-19, 22, 25-26, 31, 33-42, 51-54 and 59-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baruch.

With respect to claim 1 Baruch discloses a durable sound absorbing panel having surface burning qualities for use in a structure having an environmental area, the panel comprising:

A panel substrate (15 in figure 3) having a first face (downward facing) and a second face (upward facing), the second face opposing the first face and substantially concealed from the environmental area when installed in the structure wherein the second face is not viewable from the environmental area when installed in the structure;

The panel substrate supported from the structure (see figure 5), the panel substrate including a plurality of apertures (17 in figures 3 and 5) spread across the surface of the panel substrate to extend from the first face to the second face;

A nonwoven fibrous material (19 in figure 3) attached to the first face of the panel substrate and applied such that the apertures are covered by the non-woven fibrous material;

The non-woven fibrous material is positioned such that nearly complete exposure of the material occurs when installed (see figure 5 for installation ), permitting viewing of an aesthetically pleasing surface of the fibrous material from the environmental area of the structure (see also column 5 lines 15-20 description of element 19).

Baruch does not expressly teach wherein the airflow rate resistance through the panel is about 900 mks rayl to about 1050mks rayl, wherein airflow rate resistance through the non-woven fibrous material is about 100 mks rayl; to about 600 mks rayls, this is considered to be optimization of a results effective variable as previously advanced and addressed below in response to arguments.

While Baruch does not disclose expressly that the panel resists fire spread and smoke development, given the intended use of the panel of Baruch being in an inhabited environment, it would have been obvious to one of ordinary skill in the art to impart such qualities, most obviously through the choice of materials.

With respect to claim 2 Baruch further discloses wherein the nonwoven fibrous material is attached to the first face of the panel substrate with an adhesive (column 4lines 30-35).

With respect to claim 7 Baruch further discloses wherein the panel includes at least two side edges each having a flange for connection to a suspended ceiling grid, wherein the suspended ceiling grid includes a plurality of grid members interconnected to form panel openings, the grid members suspended from the structure with hangers (see figure 5, Column 4 lines 45-65). For clarification, the flange area of the tile is

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considered the portion which fits into the I-beam section or onto the T track section, which in the typical ceiling tile is of a smaller dimension than that of the remaining tile to allow for a uniform surface when viewed from beneath.

With respect to claim 9 Baruch discloses an interior finishing panel for use in a building structure comprising:

A semi-rigid panel substrate (15 in figure 3) supported by its edges (see installation of figure 5) with minimal panel substrate flex, the panel substrate having a first face and a second face opposing the first face, the second face being substantially concealed when the finishing panel is installed within the building structure;

a first set of apertures (17 in figure 3) in the panel substrate having a first size, wherein the second face is not viewable from an environmental area of the building when the finishing panel is installed in the building structure;

A non-woven fibrous material (19 in figure 3) attached to the first face of the panel substrate covering the first set of apertures, the fibrous material being substantially visible when installed in the building structure (see installation of figure 5).

Baruch does not expressly teach wherein the airflow rate resistance through the panel is about 900 mks rayl to about 1050mks rayl, wherein airflow rate resistance through the non-woven fibrous material is about 100 mks rayl; to about 600 mks rayls, this is considered to be optimization of a results effective variable as previously advanced and addressed below in response to arguments.

While Baruch does not disclose expressly that the panel resists fire spread and smoke development, given the intended use of the panel of Baruch being in an

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inhabited environment, it would have been obvious to one of ordinary skill in the art to impart such qualities, most obviously through the choice of materials.

With respect to claim 10 Baruch further discloses wherein the nonwoven fibrous material is attached to the first face of the panel substrate with an adhesive (column 4 lines 30-35).

With respect to claims 11, and 19 Baruch discloses the invention as claimed except wherein the apertures have sizes ranging from about 0.039 inches to about 0.117 inches. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select such a size of aperture, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

With respect to claim 14 Baruch further discloses wherein the panel includes at least two side edges each having a flange for connection to a suspended ceiling grid, wherein the suspended ceiling grid includes a plurality of grid members interconnected to form panel openings, the grid members suspended from the structure with hangers (see figure 5, Column 4 lines 45-65)(see also above claim 7).

With respect to claim 17 Baruch discloses an interior finishing panel for use in a building structure comprising:

A semi-rigid panel substrate (15 in figure 3) having an exterior face and an interior face, opposing the exterior face, the interior face substantially concealed when the panel is installed (figure 5) in the building structure, wherein the interior face is not

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viewable from an environmental area of the building structure when the finishing panel is installed in the building structure;

A plurality of apertures (17 in figure 3) having a first size passing through the panel substrate and extending across the faces; a non-woven fibrous material permanently adhered to the exterior face of the panel substrate (19 in figure 3), and positioned to cover the apertures, an aesthetically pleasing surface of the fibrous material substantially visible when the panel is installed in the building structure (see figure 5). Examiner considers the aesthetic limitation to have been obvious and understood from the specification particularly the discussion in column 1 stating that previous panels had been unaesthetic.

Baruch does not expressly teach wherein the airflow rate resistance through the panel is about 900 mks rayl to about 1050mks rayl, wherein airflow rate resistance through the non-woven fibrous material is about 100 mks rayl; to about 600 mks rayls, this is considered to be optimization of a results effective variable as previously advanced and addressed below in response to arguments.

While Baruch does not disclose expressly that the panel resists fire spread and smoke development, given the intended use of the panel of Baruch being in an inhabited environment, it would have been obvious to one of ordinary skill in the art to impart such qualities, most obviously through the choice of materials.

With respect to claim 18 Baruch further discloses wherein the nonwoven fibrous material is attached to the exterior face of the panel substrate with an adhesive (column 4lines 30-35).

With respect to claim 22 Baruch further discloses wherein the panel includes at least two side edges each having a flange for connection to a suspended ceiling grid, wherein the suspended ceiling grid includes a plurality of grid members interconnected to form panel openings, the grid members suspended from the structure with hangers (see figure 5, Column 4 lines 45-65).

With respect to claim 25 Baruch discloses a durable sound absorbing ceiling system having fire resistive qualities for use in a structure having an environmental area the system comprising:

A plurality of grid members interconnected to form a grid, the grid members being suspended from the structure (see figure 5);

A panel substrate (15 in figure 3) having a first face and a second face, the second face opposing the first face and substantially concealed from the environmental area when installed in the structure wherein the second face is not viewable from the environmental area when installed in the structure; the panel substrate supported from the grid, the panel substrate including a plurality of apertures (17) spread across the surface of the panel substrate to extend from the first face to the second face;

A nonwoven fibrous material (19) attached to the first face of the panel substrate and applied such that the apertures are covered by the nonwoven fibrous material;

The non-woven fibrous material is positioned such that nearly complete exposure of the material occurs when installed, permitting viewing of an aesthetically pleasing surface of the material from the environmental area of the structure.



Baruch does not expressly teach wherein the airflow rate resistance through the panel is about 900 mks rayl to about 1050mks rayl, wherein airflow rate resistance through the non-woven fibrous material is about 100 mks rayl; to about 600 mks rays, this is considered to be optimization of a results effective variable as previously advanced and addressed below in response to arguments.

While Baruch does not disclose expressly that the panel resists fire spread and smoke development, given the intended use of the panel of Baruch being in an inhabited environment, it would have been obvious to one of ordinary skill in the art to impart such qualities, most obviously through the choice of materials.

With respect to claim 26 Baruch further discloses wherein the nonwoven fibrous material is attached to the first face of the panel substrate with an adhesive (column 4lines 30-35).

With respect to claim 31 Baruch further discloses wherein the panel includes at least two side edges each having a flange for connection to a suspended ceiling grid, wherein the suspended ceiling grid includes a plurality of grid members interconnected to form panel openings, the grid members suspended from the structure with hangers (see figure 5, Column 4 lines 45-65).

With respect to claim 33 Baruch discloses wherein the second face includes a layer of porous insulation material (see Column 4 lines 25-35). While the non-woven layer is not explicitly stated to be an "insulation material" given the materials that are described for the layer it would be an insulation material.

With respect to claim 34 Baruch further discloses wherein the apertures are selected from the group consisting of circular, square, triangular, rectangular, and oval.

With respect to claims 35-38 Baruch further discloses wherein the panel substrate is self-supporting (shown in figures).

With respect to claims 39-42 Baruch discloses the invention as claimed except wherein the panel substrate is selected from the group consisting of metal and polycarbonate. Baruch does disclose the substrate as being a plastic and lists types of plastic and "other plastics" (Column 2 lines 55-65) it would have been obvious to one of ordinary skill in the art to select a material such as polycarbonate, a plastic, for the material of the substrate of Baruch. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

With respect to claims 47-50 Baruch discloses the invention as claimed except wherein the non-woven fibrous material comprises a polymer selected from the group consisting of polyester, nylon6, and polyethylene. Baruch does disclose the non-woven to be selected from the group which includes polymers (rayon for example as shown in Column 5 lines 15-20) it would have been obvious to one of ordinary skill in the art to select a material from the above group as it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

With respect to claims 51-54 Baruch discloses (Column 2 lines 55-65) wherein the panel is capable of providing light transmission by diffusion, and that the panel

may be translucent or transparent to any desired degree, further light diffusers are typically opaque as the desired light transmission is to take place only through the aperture portions to allow for a spread of the light.

With respect to claims 59-62 Baruch discloses the invention as claimed except wherein the spacing between the panels ranges from 0 to 3/8 inch. Examiner considers this to have been an obvious matter of optimization, addressed below in response to arguments.

Claims 3,8,15-16, 23-24, 27,28 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baruch in view of Cortonesi et al (US5942736).

With respect to claims 3,8,15-16, 23-24, 27-28, and 32 Baruch discloses the invention as claimed except having second and third size groups of apertures, and their specific sizes.

Cortonesi discloses three size groups (see figure 1) of apertures on a noise barrier.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Cortonesi to have three size groups for the apertures for the substrate of Baruch to provide "absorption at various frequencies of the incoming sound" (column 1, beginning at line 60).

While not explicitly stated in the references Examiner considers the selection of size to have been obvious to one of ordinary skill in the art as noted above.

Claims 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baruch in view of Brown et al (US4487794).

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With respect to claims 43-46 Baruch discloses the invention as claimed except wherein the substrate is metal.

Brown discloses the use of a perforate metal substrate (12 in figure 1) in which the sound incident side of the panel is covered by a fibrous material.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teaching of Brown to use a metal substrate and a fibrous material with the structure as taught by Baruch, namely that of a perforate substrate with a nonwoven material adhered thereto.

The motivation for doing so would have been that in the instance of transmission of light not being a consideration or if the desire is to transmit light only through perforations, a sound deadening panel of metal nature would be of higher thermal resistance than many plastic materials.

Furthermore it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claims 47-58 rejected under 35 U.S.C. 103(a) as being unpatentable over Baruch as applied to claims 1, 9, 17 and 25 above, and further in view of Wendt (US6467228).

Baruch as modified discloses the invention as claimed except wherein each side edge has an upwardly extending flange for connection to a suspended ceiling grid, each upwardly extending flange comprising a vertical portion, wherein the suspended ceiling grid comprises a plurality of grid members interconnected to form panel openings, the

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grid members suspended from the structure with hangers, wherein the nonwoven fibrous material extends upwardly along the flanges.

Wendt discloses panels including at least two side edges (27 and 29 in figure 1) wherein each side edge has an upwardly extending flange (26 and 28 in figure 1) for connection to a suspended ceiling grid, each upwardly extending flange comprising a vertical portion, wherein the suspended ceiling grid comprises a plurality of grid members interconnected to form panel openings, the grid members suspended from the structure with hangers.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Wendt to use the upward flanged edges with the panel of Baruch to provide ease of positioning of the panel (abstract of Wendt).

The panel of Baruch discloses the nonwoven extending to the very edges of the panel, the extension of the nonwoven up the flanges of the panel of Brauch in view of Wendt would have been obvious for at least aesthetic reasons allowing for a flawed edge to be hidden from the viewing area.

Regarding claims 47-50 Examiner considers the material selection to have been obvious to one of ordinary skill in the art, as it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Further addressed in the below response to arguments.

### ***Response to Arguments***

Applicant's arguments filed 7/25/07 have been fully considered but they are not persuasive. Applicant argues that the panels of Baruch need to be a transparent material however as pointed out above Baruch also encompasses diffusing panels, which include opaque panels.

Applicant further argues that the variables are not the result of optimization and would have required an undue amount of experimentation to determine. Applicant has not made a showing to prove this however. As such examiner must consider these values only as optimized variables.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Forrest M. Phillips whose telephone number is 5712729020. The examiner can normally be reached on Monday through Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 5712721988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FP

  
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SUPERVISORY PATENT EXAMINER